Insectary Notes

November / December 2007

INSECTARY
N.S. Dept. of Natural Resources
P.O. Box 130 Shubenacadie
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Editor's Overview

So, what's up in this issue . . .

Gina has put together a summary of the pest conditions reported at the Forestry Pest Management Forum, held in Ottawa in December. She also shed some light on how honey bees spend the winter in her Provincial Entomologist's column.

If you're wondering about fungus gnats, fleas, or blacklegged ticks, check out page 5.

Bob, Mike, and I put together information on the gypsy moth pheromone trap survey on page 6.

Some New Year's Resolutions . . .

I will no longer waste my time reliving the past, instead I will spend it worrying about the future.

I will answer my snail mail with the same enthusiasm with which I answer my e-mail.

I will balance my checkbook. (On my nose).

Start buying lottery tickets at a luckier store.

'Til next time

Jacqui

Jacqui Gordon
Editor

Reminder

As noted in the last issue, a paper copy of the newsletter will no longer be available as of 1 April 2008. Please send in your email addresses so we can continue to provide you with information.

Say What and Quotes . . .

If it's stupid but it works, it isn't stupid. -Unk.

A New Year's resolution is something that goes in one Year and out the other. -Unk.

May all your troubles last as long as your New Year's resolutions. -Joey Adams

Making resolutions is a cleansing ritual of self-assessment and repentance that demands personal honesty and, ultimately, reinforces humility. Breaking them is part of the cycle. -Eric Zorn

People are so worried about what they eat between Christmas and the New Year, but they really should be worried about what they eat between the New Year and Christmas. -Author Unknown

He who breaks a resolution is a weakling; He who makes one is a fool. -F.M. Knowles

Let's start the year with some quotes from the world of Looney Tunes . . .

Don't take life too seriously. You'll never get out alive. -Bugs Bunny

It's getting so a man can't earn a dishonest livin' no more.- Yosemite Sam

I paid my four bits to see the high diving act and I'm going to see the high diving act. - Yosemite Sam

Smart boy, got a mind like a steel trap . . . full of mice. -Foghorn Leghorn

Oh drat these computers, they're so naughty and complex. I could pinch them. - Marvin the Martian

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Highlights from the Forestry Pest Management Forum

Ottawa, 4 - 6 December 2007
Gina Penny

Table 1. PROVINCIAL HIGHLIGHTS

Abbreviations: pop(s) = population(s), **defo.** = defoliation, **N** = North, **S** = South, **E** = East, **W** = West

	BC	AB	SK	MB	ON	QC	NB	NS
INSECTS								
Spruce Budworm	Up from 2006 to 264ha	Total infestation 108,758ha	Just under 100,000ha	174,485ha total	849,045ha, slight increase	110,743ha, up from 2006	48% of traps positive, down from 60% in 2006 and high of 81% in 2005	Very low numbers. Slight increase since 2006
Gypsy Moth	No established pops.			Moth catch increased. Egg masses found. Continue to monitor.	Increased to 31,094ha		No defo detected. No defo forecast for 2008	CFIA expanded regulated area in 2007. Pops up in W. region.
Jack Pine Budworm			Not seeing much. Last outbreak in the 1980's	Moth catches down. No visible defo. No egg masses	536,051ha Foray spray program in NW. Based on L2 sampling, looks like infestation is on its way out	7,000ha affected	Pops remain at low endemic levels. No defo forecasted for 2008	Defo increased to 1,554ha. Intensity of damage was light. Continue monitoring.
Forest Tent Caterpillar		Pops. on the rise	No outbreak in Northern forest since 1998. Monitoring		271,494ha. At bottom of outbreak cycle	No defo detected. Nothing expected for 2008	Trap catches declined to the lowest levels recorded in 6 yrs. No defo expected for 2008	
Hemlock Looper						No damage	No defo detected No defo expected for 2008	No detectable defo observed. Continuing to monitor.

	BC	AB	SK	MB	ON	QC	NB	NS
INSECTS								
Large Aspen Tortrix		Pops are down	41,000ha	Scattered damage	81,947ha defo in S, larger in NW near MB border	Numbers increasing		
Mountain Pine Beetle	Mortality= 10Mha. Expecting pop. decline. Seeing increase in N-NW and South Central	Significant infestation in Grand Prairie, expansion in the South						
Spruce Beetle	36,775ha down from 2006							High levels of mortality. Pops. on the rise due to mild winters resulting in increased survival rates.
Western Spruce Budworm	397,621ha down from 2006	17,678ha affected						
DISEASES								
Dutch Elm Disease			Outbreak has spread. Tree removals = 259 down from 2006. 3 new infection areas.	Total trees removed = 14,476				
ABIOTICS								
Blowdowns					17,618ha, 3rd consecutive year, smaller than previous 2 years	largest blowdown = 400ha		

Provincial Entomologist's Overview
What's the Buzz?

Well it's January again, can you believe it! It's at this time of year that we make all sorts of resolutions vowing to better ourselves over the course of the coming year. Some of us resolve to become more organized, others vow to break bad habits, and if you're anything like myself, the majority of us resolve to start exercising, striving to become that healthy, active person we've always wanted to be. But did you know that we're not alone in this regard. Honey bees (*Apis mellifera*) are also busy "exercising." However they're not quite as interested in shedding those holiday pounds as they are in warding off cold winter weather.

Unlike other insects, honey bees do not hibernate during the winter months, instead they tough it out inside the hive. When outside temperatures dip below 12 -14 °C, worker bees begin to cluster around the lone queen bee. This aptly named winter cluster is very important since the hive's survival is dependant on keeping the queen warm. If she gets too cold, she'll become infertile and won't be able to lay eggs the following spring.

Similar to how we shiver against the cold, each of the worker bees rapidly vibrate their wings, contributing small amounts of heat to the cluster. In this way, temperatures within the cluster are maintained at a comfortable 18 - 30 °C. For those bees unfortunate enough to find themselves forming the cluster's outer layers, temperatures aren't quite as cozy at a cool 7- 9 °C. However, to prevent any bees from freezing there is a continuous rotation of bees within the cluster, with bees on the cooler edges moving toward the warmer core and vice versa. To maintain adequate temperatures within the hive the colony must consume more than two pounds of honey a week throughout the winter which is why they make such a concerted effort to collect nectar in the spring and summer months.

So the next time I find myself slipping back into my old couch potato ways, not sticking to my new years exercise resolution I'll just think of the millions of worker bees in hives across the nation, flapping their wings like crazy and be content in the knowledge that whether I exercise or not isn't a matter of life or death.

'Til Next Time,

Gina

Gina Penny
Provincial Entomologist

Bits and Pieces

Career Options 2008

Jacqui Gordon

It's true . . . winter has arrived and I admit I watch too many movies and too much TV. When I came across this list of "Top Tips if I Become an Evil Overlord" and then found "Top Tips for Heroes," well, some things just need to be shared . . .

Top Tips If I Become an Evil Overlord

I will never employ any device with a digital countdown. If I find that such a device is absolutely unavoidable, I will set it to activate when the counter reaches 117 and the hero is just putting his plan into operation.

One of my advisors will be an average five-year-old child. Any flaws in my plan that he is able to spot will be corrected before implementation.

Despite its proven stress-relieving effect, I will not indulge in maniacal laughter. When so occupied, it's too easy to miss unexpected developments that a more attentive individual could adjust to accordingly.

I will not fly into a rage and kill a messenger who brings me bad news just to illustrate how evil I really am. Good messengers are hard to come by.

My main computers will have their own special operating system that will be completely incompatible with standard IBM and Macintosh powerbooks.

And If I Become a Hero . . .

If the Evil Overlord invites me to go on a hunt with him, I will decline the invitation.

I will not try to make comrades run faster by yanking on their arms. I will instead advise them to stop turning around to look at the pursuing danger (rats, lava, etc.).

I will not trust a being with an inordinate number of tentacles.

I will always read the fine print.

I almost certainly have an Evil Twin running around somewhere, if not by birth then as a creation of the Evil Overlord. I will keep an eye out for him, and plan accordingly.

More Bits and Pieces

Most Unwanted List
Fungus Gnats
Fleas
Cutworm larvae

Dishonourable Mention
Blacklegged Ticks

Fleas

Jacqui Gordon

We have received reports of fleas still bothering dogs and cats. Although a bit uncommon for this time of year, it is not unusual to pick up a flea during the winter. In Nova Scotia we generally stop treating for fleas in November, so it would not be surprising if a few stragglers showed up in December.

To control any leftovers from the fall, wash pet bedding with the warmest water recommended on the cleaning instructions and dry in the warmest allowable setting. Place beds that cannot be washed outside in a shed or unheated building for a couple of nights of good below freezing temperatures.

If you're still having trouble, the best bet is to contact your vet to find out what steps to take.

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Fungus Gnats

Jacqui Gordon

Necessity is the mother of invention . . . and article writing. I have been noticing small dark coloured flies in my house. Leave a glass of anything alone for a few minutes and there's one floating in it. I came in and asked Jeff what he thought they were and he told me they were probably fungus gnats but that he didn't know that much about them. He also reminded me that I'd had a similar problem when I'd first moved into my new house six years ago and had started taking better care of my house plants. (Once again, I have a mind like a steel trap . . . refer to Foghorn Leghorn on page 1.)

So, onto fungus gnats . . . They are small (2.5mm), slender flies, usually black or dark grey. In the home, they feed on fungus and organic matter in the soil of house plants.

The adult gnats lay eggs in the soil. The larvae hatch and begin to feed. When the population is high, the larvae may begin to feed on the tiny plant roots but commonly the most significant "damage" caused by this creature is the reaction when your guest finds a body floating in their drink.

In about 2 weeks the larvae finish feeding, pupate, and the adult gnats emerge. The entire life cycle lasts about 4 weeks.

Control

Don't overwater your house plants. Let the soil dry out before re-watering. The fungus gnat larvae need moist soil to live and will die if the soil dries out. If that doesn't work, try putting a layer of clean sand on the top of the potting soil. This may fool the fungus gnat adults into thinking the soil is dry.

If you brought plants from the garden into the house to overwinter for next season (as I did), you may be the cause of your own misfortune. Water the plants sparingly and try to separate them from your other house plants.

The good news? They are mostly a nuisance and are harmless to people or pets.

Blacklegged Ticks

Jeff Ogden

Just when you thought it was safe to go back to the woods . . . In December, the weather was cold enough to stop the blacklegged tick in its tracks. But during a mild spell, the tick once again begins to search for food. So remember to do your tick check, after you've enjoyed a nice mild winter day.

Project Updates

Gypsy Moth Pheromone Traps

Jacqui Gordon

The gypsy moth pheromone traps were placed by IPM staff and Pest Detection Officers in July and collected in September. The survey was in two parts: delta traps placed in towns within the unregulated and newly regulated area, and daily monitored permanent traps placed across the province.

Earlier this year, the CFIA changed the boundary of the regulated area to include all of Hants and Halifax Counties, Colchester County, and Cumberland County.

The catches in the delta traps reflect a slight reduction in moth flights in the towns surveyed. Notable exceptions: Advocate with a total catch of 37 moths in 2006 and 8 moths in 2007 (larger decrease) and New Glasgow with a catch of 61 moths in 2006 and 96 moths in 2007 (increase). I would tend to blame the winter weather of January/ February 2007 for any downward population trend, but overwintering egg mass studies showed a very healthy hatch rate.

The permanent multipher traps survey gives a snapshot of the population across the province. There were increases in Lunenburg, Hants, and Colchester Counties.

Once again thanks goes out to the Pest Detection Officers who make the time to complete this survey.

***The information on this map may have come form a variety of government and non government sources and is subject to change without notice. The Nova Scotia department of Natural Resources accepts no liability for errors, deficiencies, or faults on this map.*

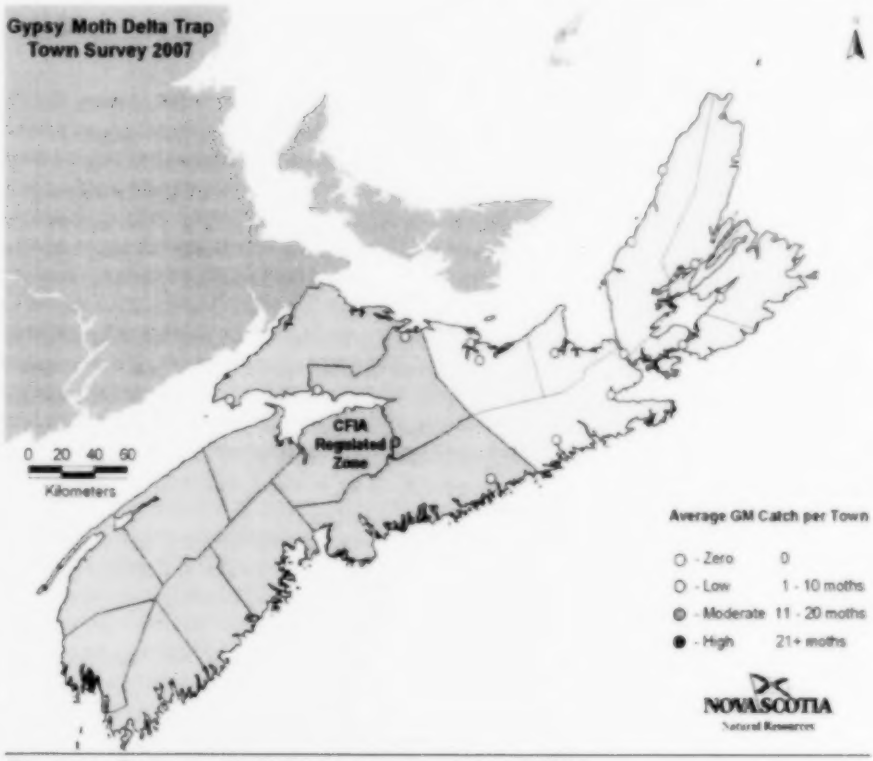

*Figure 1. Gypsy moth delta trap town survey, 2007**.*

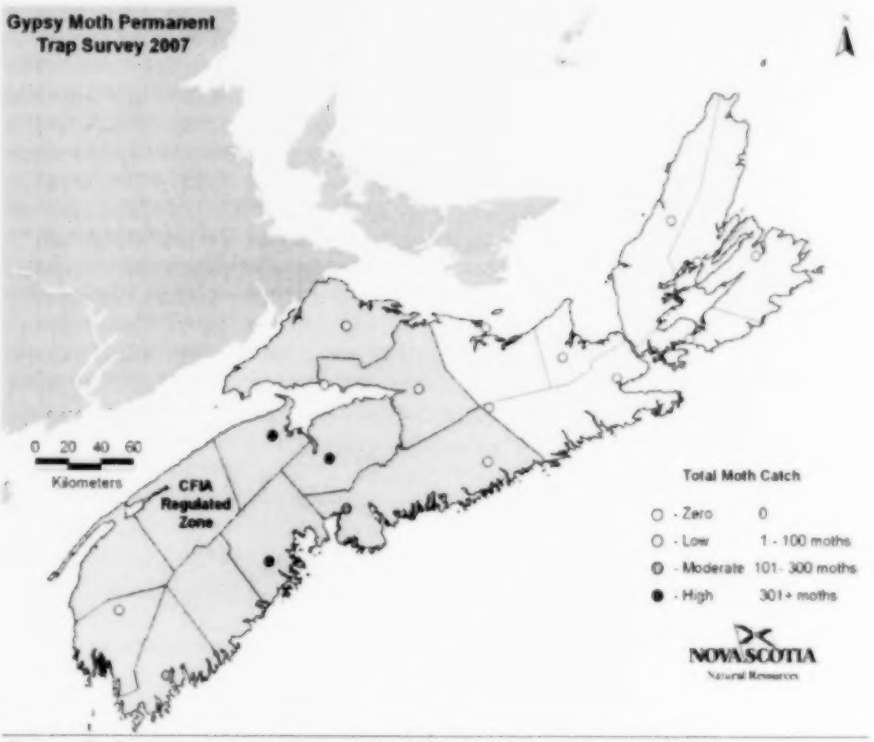

*Figure 2. Gypsy moth permanent (multipher) trap survey, 2007**.*